

REMARKS

The above amendments and these remarks are being submitted responsive to the Office action dated September 23, 2005 and the Notice of Non-Compliant Amendment dated May 11, 2006. Prior to entry of the present Amendment, claims 1-41 were pending in the application, with claims 5-7, 17, 25-29, and 36-39 withdrawn from initial examination due to Applicant's response to a first Office action Restriction Requirement. Applicant's prior response to the September 23, 2006 Office action was not entered because the amendments proposed therein caused the claims to be directed to a non-elected invention. Pursuant to this Amendment, claim 1 is amended, claims 13 and 19-41 are cancelled without prejudice, and new claims 42-54 are added. Reconsideration of the September 23, 2006 Office action and the May 11, 2006 Notice of Non-Compliant Amendment are requested in view of the foregoing amendments and the following remarks.

As an initial matter, Applicant thanks the Examiner for providing the Examiner's interpretation of the terms "less than approximately 5% copper oxide" and "majority." Applicant agrees with the Examiner that "less than approximately 5% copper oxide" may mean no copper oxide so long as the claim does not otherwise recite that some copper oxide is present. With respect to "majority," Applicant requests clarification from the Examiner that the Examiner in fact interpreted "majority" to mean at least 20 wt% zinc oxide, or whether "20" is a typographical error that was intended by the Examiner to be "50."

Claims 1-41 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,319,306 to Edlund et al. ("Edlund") in view of U.S. Patent No. 6,413,449 to Wieland et al. ("Wieland"). Applicant has studied the cited references in view of the original

claims and the reasons expressed in the Office action. Applicant respectfully disagrees with the Examiner that the subject matter of all of the examined claims is rendered obvious by the cited references. However, by the above amendments, claim 13 is presented in independent form as amended claim 1, and claims 19-41 are cancelled without prejudice. Applicant is not intending to abandon the subject matter of the original claims and understands that prosecution of this subject matter may be resumed in a related patent application.

In the Office action, the rejection of original claim 13 was supported by the position that Edlund teaches a reforming catalyst bed that is air permeable and that does not require housing or shielding. Support for this refusal was cited in the Office action as being found in Column 5, lines 27-45, and in Figs. 3 and 4 of Edlund. Applicant respectfully requests reconsideration of this refusal. Specifically, Figs. 3 and 4 of Edlund are schematic diagrams that do not illustrate the details of the reforming catalyst bed. Figs. 3 and 4 of the cited patent to Edlund are reproduced below for the Examiner's convenience, As shown, the reforming region is indicated at 32 and includes a reforming catalyst 34. Also shown is a shell, or housing, 31 that contains at least a portion of the reforming region and a separation region 38. The cited passage from Column 5 of Edlund discusses that the shell may include internal or external insulating material and that this insulating material may be in the form of an air-filled cavity.

Fig. 3

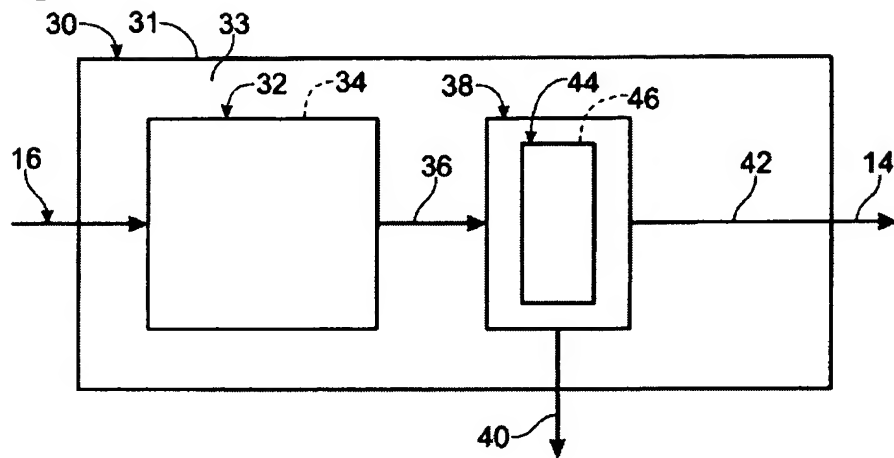
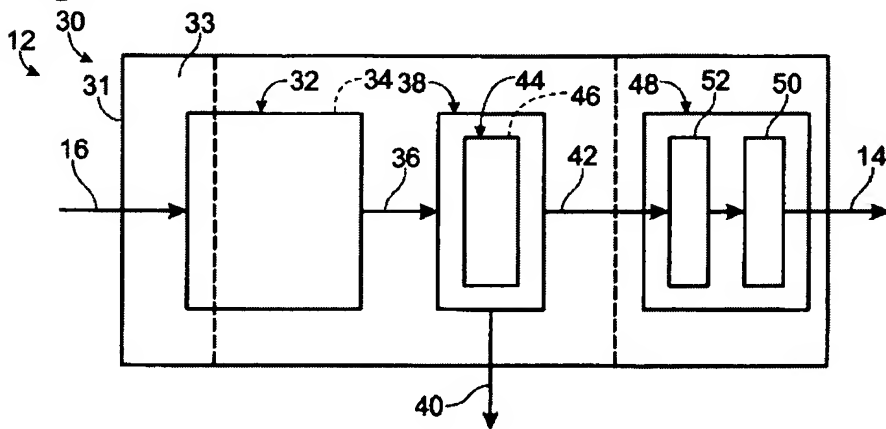


Fig. 4



Applicant submits that nowhere in the cited passage or in Figs. 3 and 4 is it disclosed or suggested that the reforming region of the cited Edlund patent is an air-permeable region. Furthermore, and as discussed in the background of the present application, conventional methanol steam reforming catalysts are pyrophoric and therefore cannot be contained in air-permeable catalyst beds. In view of the above, Applicant requests reconsideration of the rejection of original claim 13. As discussed, the cited reference fails to disclose or suggest the inclusion of an air-permeable catalyst bed. Furthermore, the present disclosure, which is

commonly owned with the cited reference to Edlund, further discusses that the catalyst bed of Edlund is not an air-permeable catalyst bed. If the Examiner requires a declaration to this effect, the Examiner is invited to contact Applicant's undersigned attorney.

The subject matter of claim 13 has been presented in independent form as amended claim 1, and original claim 13 has been cancelled without prejudice. Upon allowance of amended claim 1, Applicant submits that the rejections of claims 2-4, 8-12, 14-16, and 18 should be withdrawn and that previously withdrawn claims 5-7 and 17 should also be allowed.

By the above amendments, new claims 42-54 are added. These new claims depend directly or indirectly from amended claim 1 and therefore should be allowed when claim 1 is allowed. Applicant submits that no new matter has been added by the above amendments. New claim 42 recites that the catalyst contains copper oxide, but less than 5 wt% copper oxide. As discussed above, claim 42 therefore does not include 0 wt% copper oxide. New claim 43 recites that the active components include at least 50 wt% zinc oxide, and new claims 44-48 depend from new claim 43. New claim 49 recites that the active components include greater than 50 wt% zinc oxide, and new claims 50-54 depend from new claim 49. Applicant notes that several of the new dependent claims recite subject matter that is directed to a non-elected species. Specifically, claims 44-46 and 50-52 correspond in recited dependent subject matter to withdrawn claims 5-7. Accordingly, should claims 1, 43, and 49 not be allowed, Applicant understands that claims 44-46 and 50-52 will be withdrawn.

Applicant believes that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, Applicant respectfully requests that the

Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if the Examiner believes that a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Respectfully submitted,

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